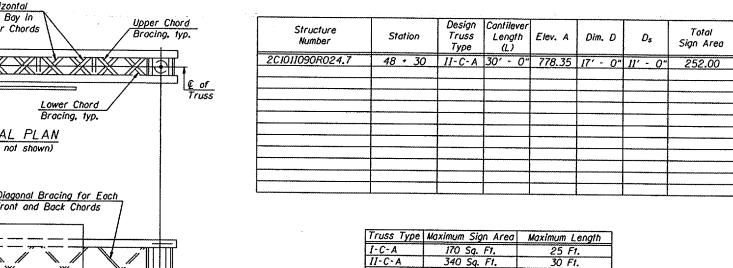
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION





 -		<u></u>		© Upper Chord
15'-0"	30 p.s.f. on Maximum Sign Area (See Table)	10 p.s.f.	٠	
1	Maximum Length (See Table		30'-0" Max.	
			<u> </u>	
	The state of the s		and the same	Bottom of Base Plate

40 F1.

DESIGN WIND LOADING DIAGRAM

400 Sq. Ft.

Parameters shown are basis for I.D.O.T. Standards Installations not within dimensional limits shown require special analysis for all components.

After adjustments to level truss and insure adequate vertical clearance, all top and leveling nuts shall be tightened against the base plate with a minimum torque of 200 lb.-ft. Stainless steel mesh shall then be placed around the perimeter of the base plate. Secure to base plate with stainless steel banding.

Note:

Trusses shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The contractor is responsible for maintaining the configuration and protection of the trusses.

TOTAL BILL OF MATERIAL

ITEM	UNIT TOTA
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE I-C-A	Foot
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE 11-C-A	Foot
OVERHEAD SIGN STRUCTURE CANTILEVER TYPE III-C-A	Foot
OVERHEAD SIGN STRUCTURE WALKWAY, TYPE A	Foot
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.

Various Routes
OVD SIN STR REP & REPL 2008-9
Various Counties
Sheet 38 of 105
Contract Number 44973

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions, ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

DESIGN STRESSES: Field Units f'c = 3,500 p.s.i, fy = 60,000 p.s.i. (reinforcement)

* If M270 Gr. 50W (M222) steel is proposed,

approved by the Engineer as suitable for

galvanizing and welding.

chemistry for plate to be used shall first be

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 and D1.2 Structural Welding Codes (Steel and Aluminum) and the Standard Specificiations.

MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A53 Grade B or A500 Grade B or C. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36. Gr. 50 or Gr. 50W*. Stainless steel for shims, sleeves and handhole covers shall be ASTM A240. Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR ALUMINUM TRUSSES: All boits noted as "high strength" must satisfy the requirements of AASHTO MI64 (ASTM A325), or approved alternate, and must have matching lock nuts. Threaded studs for splices (if Members interfere) must satisfy the requirements of ASTM A449. ASTM A193. Grade B7, or approved alternate, and must have matching lock nuts. Boilts and lock nuts not required to be high strength must satisfy the requirements of ASTM A307. All boilts and lock nuts must be hot dip galvanized per AASHTO M232. The lock nuts must have nylon or steel inserts. A stainless steel flat washer conforming to ASTM A240 Type 302 or 304, is required under both head and nut or under both nuts where threaded studs are used. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the IDOT Standard Specifications for Road and Bridge Construction. Rotational capacity ("ROCAP") testing of boilts will not be required.

U-BOLTS AND EYEBOLTS: U-Bolts and Eyebolts must be produced from ASTM A276 Type 304. 304L, 316 or 316L, Condition A, cold finished stainless steel, or an equivalent material acceptable to the Engineer. All nuts for U-Bolts and Eyebolts must be lock nuts equivalent to ASTM A307 with nylon or steel inserts and hot dip galvanized per AASHTO M232. A stainless steel flat washer conforming to ASTM A240, Type 302 or 304, is required under each U-Bolt and Eyebolt lock nut.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO MIII. Painting is not permitted.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 105 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 10° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for Drilled Shaft Concrete Foundations shall include reinforcement bars complete in place.

CANTILEVER SIGN STRUCTURES
GENERAL PLAN & ELEVATION
ALUMINUM TRUSS & STEEL POST

District 2 Overhead Sign Structure Repair & Replacement

	Alternate Direction of Horizontal Diagonal Bracing for Each Bay in Planes of Upper and Lower Chords Bracing, typ.
	Lower Chord Bracing, typ.
	TYPICAL PLAN (Walkway not shown)
Sign P	anel — Alternate Vertical Diagonal Bracing for Each Bay in Planes of Front and Back Chords
n (Ds.)	
Depth of Sign (Ds.	
01	Walkway, railing and
part of e above ? A.	lights (if required) omitted for clarity Cantilever Length (L) and Basis of Payment
Lowest part of structure above Elevation A.	Cantilever Length (L.) and Basis of Payment Steel Post Support (along © of truss)
<u>Elev. A</u> (Location varie	— deleb
Elev. A = Elevatio clearance to sign.	n at point of minimum walkway support or truss.
	TYPICAL ELEVATION

Sign support structures may be subject to damaging vibrations and oscillations when sign panels are not in place during erection or maintenance of the structure. To avoid these vibrations and oscillations, consideration should be given to attaching temporary blank sign panels to the structure.

Looking in Direction of Traffic

DESIGNED -	- 20
CHECKED -	EXAMINED
DRAWN -	PASSED ENGINEER OF BRIDGE DESIGN
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES
0SC-A-1	6/01/2007

NUMBER	REVISION	DATE